REMARKS

The present application includes claims 1-22. Claims 1-22 were rejected. Claims 1 and 12 are amended in response to the Examiner's rejections.

Claim 1 is amended to recite the limitation of generating a sequence of temporally separated, unfolded parallel view sinograms corresponding to scans through said subject during a scanning time interval, where the sequence includes a first sinogram and a last sinogram, the first and last sinograms being temporally adjacent. Claim 1 is also amended to recite the limitation of folding data from a first region of view angles from each of the sinograms into a second region of view angles in a corresponding next temporally adjacent sinogram and folding data from a third region of view angles from each of the sinograms into a fourth region of view angles in a corresponding previous temporally adjacent sinogram, where the folding of data from the first region and the folding of data from the third region include combining a last half of the first sinogram with a first half of the last sinogram.

Claim 12 is amended to recite the limitation of a sinogram pre-processing module generating a sequence of temporally separated, unfolded parallel view sinograms corresponding to scans through the subject during a scanning time interval, where the sequence includes a first sinogram and a last sinogram, the first and last sinograms being temporally adjacent. Claim 12 is also amended to recite the limitation of a sinogram data folding module folding data from a first region of view angles from each of the

sinograms into a second region of view angles in a corresponding next temporally adjacent sinogram, and the sinogram data folding module folding data from a third region of view angles from each of the sinograms into a fourth region of view angles in a corresponding previous temporally adjacent sinogram, where the sinogram data folding module combines a last half of the first sinogram with a first half of the last sinogram.

Claims 1-22 were rejected under 35 U.S.C. § 102(b) as being anticipated by Harman (U.S. Patent No. 5,406,479).

The Applicant turns to the rejection of claims 1-22 under 35 U.S.C. § 103(a) as being anticipated by Harman. Harman describes a method for rebinning and for correcting cone beam error in a fan beam computed tomographic scanner system. Specifically, Harman discloses a scanning electron beam computed tomography system that provides fan beam data in a fan beam sinogram (col. 6, lines 39-61). The system first rebins the fan beam data into parallel beam format to enable the use of a Fourier reconstruction technique (col. 7, lines 45-51). Harman then describes the discarding or "folding" of redundant data in a single fan beam sinogram, namely data occurring at angles (σ, θ) and $(-\sigma, \theta + \pi)$ (col. 8, lines 45-63; FIGS. 2A and 2B).

Harman addresses the problem of cone beam error correction by pairing scans in **non-temporally adjacent** pairs (col. 9, lines 29-35). That is, Harman divides up N scans into pairings with the first scan paired with the Nth scan, the second scan paired with the

(N-1) scan, the third scan paired with the (N-2) scan, and so on (col. 9, lines 29-35). Harman then discloses the folding over of redundant data from these scan pairs (col. 9, lines 29-49). In this way, Harman describes the folding over of redundant data from one scan to another, non-temporally adjacent scan.

For example, under Harman, if the system obtains 5 scans in sequence, namely A, B, C, D and E, then Harman describes the pairing of scans A-E and B-D and leaving scan C by itself (col. 9, lines 29-35). Then, the rebinning algorithm of Harman folds the redundant data of the first scan (A or B) onto the main portion of the second scan (E or D) (col. 9, lines 36-49). With scan C, the redundant data is folded into the main portion of the same scan C (col. 9, lines 29-35). Therefore, as the scan pairings A-E and B-D are non-temporally adjacent scans, Harman merely describes the rebinning and folding over of redundant data for non-temporally adjacent scans.

Conversely, Harman does not teach 1) generating a sequence of temporally separated, unfolded parallel view sinograms corresponding to scans through said subject during a scanning time interval, where the sequence includes a first sinogram and a last sinogram, the first and last sinograms being **temporally adjacent**, and 2) folding data from a first region of view angles from each of the sinograms into a second region of view angles in a corresponding next temporally adjacent sinogram and folding data from a third region of view angles from each of the sinograms into a fourth region of view angles in a corresponding previous temporally adjacent sinogram, **where the folding of data from the first region and the folding of data from the third region include**

combining a last half of the first sinogram with a first half of the last sinogram, as recited in claim 1. Furthermore, Harman does not teach 1) a sinogram pre-processing module generating a sequence of temporally separated, unfolded parallel view sinograms corresponding to scans through the subject during a scanning time interval, where the sequence includes a first sinogram and a last sinogram, the first and last sinograms being **temporally adjacent**, and 2) a sinogram data folding module folding data from a first region of view angles from each of the sinograms into a second region of view angles in a corresponding next temporally adjacent sinogram, and the sinogram data folding module folding data from a third region of view angles from each of the sinograms into a fourth region of view angles in a corresponding previous temporally adjacent sinogram, **where the sinogram data folding module combines a last half of the first sinogram with a first half of the last sinogram**, as recited in claim 12.

Instead, as described above, Harman merely describes the folding of redundant data from a first scan to a second scan in a pair of non-temporally adjacent scans (col. 9, lines 29-49). In this way, Harman describes the folding over of data in a pair of scans that are as temporally distant as possible in a given set. For example, as described above, in a given set of scans, namely scans 1 to N, Harman describes the pairing of the first scan with the Nth scan, the second scan with the (N-1) scan, and so on (col. 9, lines 29-44). In this way, the first scan and Nth scan are as temporally distant as possible in the given set of scans. In addition, after the first scan and Nth scan have been paired, the next two scans that are the most temporally distant are the second scan and the (N-1)

scan. Therefore, as Harman explicitly discloses the folding over of data from scans that are as temporally distant as possible, Harman is therefore incapable of disclosing the folding of data from temporally adjacent scans, as recited in claims 1 and 12.

Thus, the Applicant respectfully submits that Harman does not teach the limitations of the claimed invention.

The present rejection includes claims 1-22. As stated above, independent claims 1 and 12 are amended in response to the Examiner's rejections. Applicant respectfully submits that independent claims 1 and 12 are amended to recite limitations not taught Harman. Claims 2-11 and 13-22 depend from claims 1 and 12, respectively. Consequently, the Applicant respectfully submits that claims 1-22 should be allowable.

CONCLUSION

The Applicant submits that the claims of the present invention should be in condition for allowance. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited and encouraged to contact the Applicant at the number below.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GTC, Account No. 070845.

Respectfully submitted,

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